Claims

What is claimed is:

1. A generalized interface for interconnecting electronic musical instruments and signal processing systems, said generalized interface comprising:

an outgoing multi-channel audio interface for receiving instrument audio signals comprising at least three independent audio signals generated by an external musical instrument, wherein said outgoing multi-channel audio interface provides said instrument audio signals to an external signal processing system; and

an outgoing control interface for receiving MIDI control signals generated by said external musical instrument, said outgoing control interface providing said MIDI control signals to said external signal processing system.

2. The interface according to claim 1, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector.

3. The interface according to claim 1, wherein said outgoing multi-channel audio interface and said outgoing control interface utilize a plurality of physical interface connectors.

4. The interface according to claim 1, wherein said instrument audio signals and said MIDI control signals are multiplexed to form a common multiplexed signal that is provided to said external signal processing system.

5. The interface according to claim 4, wherein said common multiplexed signal is provided to said external signal processing system using a wireless communication link.

6. The interface according to claim 4, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector, and wherein

said common multiplexed signal is provided to said external signal processing system using said common physical interface connector.

7. The interface according to claim 4, wherein said common multiplexed signal is provided to said external signal processing system using an optical communication link.

8. The interface according to claim 1, said interface further comprising:

an incoming control interface for receiving incoming control signals generated by said external signal processing system, said incoming control interface providing said incoming control signals to said external musical instrument.

9. The interface according to claim 8, wherein said incoming control signals comprise signals of MIDI format.

10. The interface according to claim 1, said interface further comprising:

an incoming multi-channel audio interface for receiving a plurality of incoming audio signals generated by said external signal processing system, said incoming plurality of multi-channel audio interface providing said incoming audio signals to said external musical instrument.

11. The interface according to claim 1, said interface further comprising:

an outgoing control interface for receiving non-MIDI control signals generated by said external musical instrument, said outgoing control interface providing said non-MIDI control signals to said external signal processing system.

12. The interface according to claim 1, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

13. The interface according to claim 1, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

14. The interface according to claim 1, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to an audio subsystem and a control subsystem integrated with said external musical instrument.

15. The interface according to claim 1, said interface further comprising:

a moderate-power interface for receiving moderate-load electrical power provided by said external signal processing system, said moderate-power interface providing said moderate-load electrical power to said external musical instrument, wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

16. The interface according to claim 15, wherein said moderate-load electrical power provided by said moderate-power interface is adapted to provide power to controllable lighting devices associated with said external musical instrument.

17. The interface according to claim 15, wherein said moderate-load electrical power provided by said moderate-power interface is adapted to provide power to a video device associated with said external musical instrument.

18. The interface according to claim 1, said interface further comprising:

an outgoing video interface for receiving outgoing video signals generated by said external musical instrument, said outgoing video interface providing said outgoing video signals to said external signal processing system.

19. The interface according to claim 1, said interface further comprising:

an incoming video interface for receiving incoming video signals generated by said external signal processing system, said incoming video interface providing said incoming video signals to said external musical instrument.

20. The interface according claim 2, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external signal processing system.

21. The interface according claim 2, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

22. The interface according claim 2, wherein said common physical connector is for mating with a connector integrated with said external musical instrument.

23. The interface according claim 2, wherein said common physical connector is for mating with a connector integrated with said external signal processing system.

24. The interface according claim 2, wherein said common physical connector is attached to one end of a cable assembly for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

25. The interface according claim 3, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external musical instrument.

26. The interface according to claim 3, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external signal processing system.

27. A method for interconnecting electronic musical instruments and signal processing systems, said method comprising:

receiving instrument audio signals at an outgoing multi-channel audio interface, wherein said instrument audio signals comprise at least three independent audio signals generated by an external musical instrument;

providing said instrument audio signals to an external signal processing system;

receiving MIDI control signals at an outgoing control interface, wherein said MIDI control signals are generated by said external musical instrument; and

providing said MIDI control signals to said external signal processing system.

28. The method according to claim 27, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector.

29. The method according to claim 27, wherein said outgoing multi-channel audio interface and said outgoing control interface utilize a plurality of physical interface connectors.

30. The method according to claim 27, wherein said instrument audio signals and said MIDI control signals are multiplexed to form a common multiplexed signal that is provided to said external signal processing system.

31. The method according to claim 30, wherein said common multiplexed signal is provided to said external signal processing system using a wireless communication link.

32. The method according to claim 30, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector, and wherein

said common multiplexed signal is provided to said external signal processing system using said common physical interface connector.

33. The method according to claim 30, wherein said common multiplexed signal is provided to said external signal processing system using an optical communication link.

34. The method according to claim 27, said method further comprising:

receiving incoming control signals at an incoming control interface, wherein said incoming control signals are generated by said external signal processing system, said incoming control interface providing said incoming control signals to said external musical instrument.

35. The method according to claim 34, wherein said incoming control signals comprise signals of MIDI format.

36. The method according to claim 27, said method further comprising:

receiving a plurality of incoming audio signals at an incoming multi-channel audio interface, wherein said plurality of incoming audio signals are generated by said external signal processing system, said incoming multi-channel audio interface providing said plurality of incoming audio signals to said external musical instrument.

37. The method according to claim 27, said method further comprising:

receiving non-MIDI control signals at an outgoing control interface, wherein said non-MIDI control signals are generated by said external musical instrument, said outgoing control interface providing said non-MIDI control signals to said external signal processing system.

38. The method according to claim 27, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

39. The method according to claim 27, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

40. The method according to claim 27, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to an audio subsystem and a control subsystem integrated with said external musical instrument.

41. The method according to claim 27, said method further comprising:

receiving moderate-load electrical power at a moderate-power interface, wherein said moderate-load electrical power is provided by said external signal processing system, said moderate-power interface providing said moderate-load electrical power to said external musical instrument, and wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

42. The method according to claim 41, wherein said moderate-load electrical power provided by said moderate-power interface is adapted to provide power to controllable lighting devices associated with said external musical instrument.

43. The method according to claim 41, wherein said moderate-load electrical power provided by said moderate-power interface is adapted to provide power to a video device associated with said external musical instrument.

44. The method according to claim 27, said method further comprising:

receiving outgoing video signals at an outgoing video interface, wherein said outgoing video signals are generated by said external musical instrument, said outgoing video interface providing said outgoing video signals to said external signal processing system.

45. The method according to claim 27, said method further comprising:

receiving incoming video signals at an incoming video interface, wherein said incoming video signals are generated by said external signal processing system, said incoming video interface providing said incoming video signals to said external musical instrument.

46. The method according claim 28, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external signal processing system.

47. The method according claim 28, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

48. The method according claim 28, wherein said common physical connector for mating with a connector integrated with said external musical instrument.

49. The method according claim 28, wherein said common physical connector for mating with a connector integrated with said external signal processing system.

50. The method according claim 28, wherein said common physical connector is attached to one end of a cable assembly for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

51. The method according claim 29, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external musical instrument.

52. The method according to claim 29, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external signal processing system.

53. A generalized interface for interconnecting electronic musical instruments and signal processing systems, said generalized interface comprising:

an outgoing multi-channel audio interface for receiving instrument audio signals comprising at least three independent audio signals generated by an external musical instrument, wherein said outgoing multi-channel audio interface provides said instrument audio signals to an external signal processing system;

an incoming control interface for receiving incoming control signals generated by said external signal processing system, said incoming control interface providing said incoming control signals to said external musical instrument; and

an outgoing control interface for receiving control signals generated by said external musical instrument, said outgoing control interface providing said control signals to said external signal processing system.

54. The interface according to claim 53, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector.

55. The interface according to claim 53, wherein said outgoing multi-channel audio interface and said outgoing control interface utilize a plurality of physical interface connectors.

56. The interface according to claim 53, wherein said incoming control signals comprise signals of MIDI format.

57. The interface according to claim 53, said interface further comprising:

an incoming multi-channel audio interface for receiving a plurality of incoming audio signals generated by said external signal processing system, said incoming multi-channel audio interface providing said plurality of incoming audio signals to said external musical instrument.

58. The interface according to claim 53, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

59. The interface according to claim 53, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

60. The interface according to claim 53, said interface further comprising:

a moderate-power interface for receiving moderate-load electrical power provided by said external signal processing system, said moderate-power interface providing said moderate-load electrical power to said external musical instrument, wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

61. The interface according to claim 53, said interface further comprising:

an outgoing video interface for receiving outgoing video signals generated by said external musical instrument, said outgoing video interface providing said outgoing video signals to said external signal processing system.

62. The interface according to claim 53, said interface further comprising:

an incoming video interface for receiving incoming video signals generated by said external signal processing system, said incoming video interface providing said incoming video signals to said external musical instrument.

63. The interface according claim 54, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external signal processing system.

64. The interface according claim 54, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

65. The interface according claim 54, wherein said common physical connector is for mating with a connector integrated with said external musical instrument.

66. The interface according claim 54, wherein said common physical connector is for mating with a connector integrated with said external signal processing system.

67. The interface according claim 54, wherein said common physical connector is attached to one end of a cable assembly for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

68. The interface according claim 55, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external musical instrument.

69. The interface according to claim 55, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external signal processing system.

70. A method for interconnecting electronic musical instruments and signal processing systems, said method comprising:

receiving instrument audio signals at an outgoing multi-channel audio interface, wherein said instrument audio signals comprise at least three independent audio signals generated by an external musical instrument;

providing said instrument audio signals to an external signal processing system;

receiving incoming control signals at an incoming control interface, wherein said incoming control signals are generated by said external signal processing system;

providing said incoming control signals to said external musical instrument;

receiving control signals at an outgoing control interface, wherein said control signals are generated by said external musical instrument; and

providing said control signals to said external signal processing system.

71. The method according to claim 70, wherein said outgoing multi-channel audio interface and said outgoing control interface are integrated to utilize a common physical interface connector.

72. The method according to claim 70, wherein said outgoing multi-channel audio interface and said outgoing control interface utilize a plurality of physical interface connectors.

73. The method according to claim 70, wherein said incoming control signals comprise signals of MIDI format.

74. The method according to claim 70, said method further comprising:

receiving a plurality of incoming audio signals at an incoming multi-channel audio interface, wherein said plurality of incoming audio signals are generated by said external signal processing system, and wherein said incoming multi-channel audio interface provides said plurality of incoming audio signals to said external musical instrument.

75. The method according to claim 70, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, wherein said low-power interface provides said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

76. The method according to claim 70, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, wherein said low-power interface provides said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

77. The method according to claim 70, said method further comprising:

receiving moderate-load electrical power at a moderate-power interface, wherein said moderate-load electrical power is provided by said external signal processing system, wherein said moderate-power interface provides said moderate-load electrical power to said external musical instrument, and wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

78. The method according to claim 70, said method further comprising:

receiving outgoing video signals at an outgoing video interface, wherein said outgoing video signals are generated by said external musical instrument, and wherein said outgoing video interface provides said outgoing video signals to said external signal processing system.

79. The method according to claim 70, said method further comprising:

receiving incoming video signals at an incoming video interface, wherein said incoming video signals are generated by said external signal processing system, wherein said incoming video interface provides said incoming video signals to said external musical instrument.

80. The method according claim 71, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external signal processing system.

81. The method according claim 71, wherein said common physical connector is attached to one end of a cable for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

82. The method according claim 71, wherein said common physical connector is for mating with a connector integrated with said external musical instrument.

83. The method according claim 71, wherein said common physical connector is for mating with a connector integrated with said external signal processing system.

84. The method according claim 71, wherein said common physical connector is attached to one end of a cable assembly for connecting said outgoing multi-channel audio interface and said outgoing control interface to said external musical instrument.

85. The method according claim 72, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external musical instrument.

86. The method according to claim 72, wherein at least one physical interface connector of said plurality of physical interface connectors is configured to mate with a connector integrated with said external signal processing system.

87. A generalized interface for interconnecting electronic musical instruments and signal processing systems, said generalized interface comprising:

an outgoing multi-channel audio interface for receiving instrument audio signals comprising at least three independent audio signals generated by an external musical instrument, wherein said outgoing multi-channel audio interface provides said instrument audio signals to an external signal processing system; and

an incoming multi-channel audio interface for receiving a plurality of incoming audio signals generated by said external signal processing system, said incoming multi-channel audio interface providing said plurality of incoming audio signals to said external musical instrument.

88. The interface according to claim 87, wherein said outgoing multi-channel audio interface and said incoming multi-channel audio interface are integrated to utilize a common physical interface connector.

89. The interface according to claim 87, wherein said outgoing multi-channel audio interface and said incoming multi-channel audio interface utilize a plurality of physical interface connectors.

90. The interface according to claim 87, said interface further comprising:

a wireless communication link for providing said instrument audio signals to said external signal processing system and said plurality of incoming audio signals to said external musical instrument.

91. The interface according to claim 87, said interface further comprising:

an incoming control interface for receiving incoming control signals generated by said external signal processing system, said incoming control interface providing said incoming control signals to said external musical instrument.

92. The interface according to claim 91, wherein said incoming control signals comprise signals of MIDI format.

93. The interface according to claim 87, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

94. The interface according to claim 87, said interface further comprising:

a moderate-power interface for receiving moderate-load electrical power provided by said external signal processing system, said moderate-power interface providing said moderate-load electrical power to said external musical instrument, wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

95. The interface according to claim 87, said interface further comprising:

an outgoing video interface for receiving outgoing video signals generated by said external musical instrument, said outgoing video interface providing said outgoing video signals to said external signal processing system.

96. A method for interconnecting electronic musical instruments and signal processing systems, said method comprising:

receiving instrument audio signals at an outgoing multi-channel audio interface, wherein said instrument audio signals comprise at least three independent audio signals generated by an external musical instrument;

providing said instrument audio signals to an external signal processing system;

receiving a plurality of incoming audio signals at an incoming multi-channel audio interface, wherein said plurality of incoming audio signals are generated by said external signal processing system; and

providing said plurality of incoming audio signals to said external musical instrument.

97. The method according to claim 96, wherein said outgoing multi-channel audio interface and said incoming multi-channel audio interface are integrated to utilize a common physical interface connector.

98. The method according to claim 96, wherein said outgoing multi-channel audio interface and said incoming multi-channel audio interface utilize a plurality of physical interface connectors.

99. The method according to claim 96, said method further comprising:

providing said instrument audio signals to said external signal processing system and said plurality of incoming audio signals to said external musical instrument using a wireless communication link.

100. The method according to claim 96, said method further comprising:

receiving incoming control signals at an incoming control interface, wherein said incoming control signals are generated by said external signal processing system, and wherein said incoming control interface provides said incoming control signals to said external musical instrument.

101. The method according to claim 100, wherein said incoming control signals comprise signals of MIDI format.

102. The method according to claim 96, said method further comprising:

receiving electrical power at a low-power interface, wherein said electrical power is provided by said external signal processing system, wherein said low-power interface provides said electrical power to said external musical instrument, and wherein said electrical power is adapted to provide power to an audio subsystem integrated with said external musical instrument.

103. The method according to claim 96, said interface further comprising:

receiving moderate-load electrical power at a moderate-power interface, wherein said moderate-load electrical power is provided by said external signal processing system, wherein said moderate-power interface provides said moderate-load electrical power to said external musical instrument, and wherein said moderate-load electrical power is adapted to provide power to auxiliary systems associated with said external musical instrument.

104. The method according to claim 96, said method further comprising:

receiving outgoing video signals at an outgoing video interface, wherein said outgoing video signals are generated by said external musical instrument, and wherein said outgoing video interface provides said outgoing video signals to said external signal processing system.

105. A generalized interface for interconnecting electronic music systems, said generalized interface comprising:

an incoming MIDI control interface for receiving incoming MIDI control signals generated by a first electronic music system, said incoming MIDI control interface providing said incoming MIDI control signals to a second electronic music system; and

an outgoing MIDI control interface for receiving outgoing MIDI control signals generated by said first electronic music system, said outgoing MIDI control interface providing said outgoing control signals to said second electronic music systems, wherein said incoming MIDI control interface and said outgoing MIDI control interface are integrated to utilize a common physical interface connector.

106. The interface according to claim 105, wherein said common physical interface connector is attached to one end of a cable.

107. The interface according claim 105, wherein said common physical interface connector mates with a connector integrated with said first electronic music system.

108. The interface according claim 107, wherein said common physical interface connector mates with a connector integrated with said second electronic music systems.

109. The interface according to claim 105, said interface further comprising:

a low-power interface for receiving electrical power provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

110. A method for interconnecting electronic music systems, said method comprising:

receiving incoming MIDI control signals at an incoming MIDI control interface, wherein said incoming MIDI control signals are generated by a first electronic music system;

providing said incoming MIDI control signals to a second electronic music system;

receiving outgoing MIDI control signals at an outgoing MIDI control interface, wherein said outgoing MIDI control signals are generated by said first electronic music system, and wherein said incoming MIDI control interface and said outgoing MIDI control interface are integrated to utilize a common physical interface connector; and

providing said outgoing control signals to said second electronic music systems.

111. The method according to claim 110, wherein said common physical interface connector is attached to one end of a cable.

112. The method according claim 110, wherein said common physical interface connector mates with a connector integrated with said first electronic music system.

113. The method according claim 112, wherein said common physical interface connector mates with a connector integrated with said second electronic music systems.

114. The method according to claim 110, said method further comprising:

receiving electrical power provided at a low-power interface, wherein said electrical power is provided by said external signal processing system, said low-power interface providing said electrical power to said external musical instrument, wherein said electrical power is adapted to provide power to a control subsystem integrated with said external musical instrument.

115. A generalized interface for interconnecting electronic music systems, said generalized interface comprising:

an incoming MIDI control interface for receiving incoming MIDI control signals generated by a first electronic music system, said incoming MIDI control interface providing said incoming MIDI control signals to a second electronic music system using a wireless communication link; and

an outgoing MIDI control interface for receiving outgoing MIDI control signals generated by said first electronic music system, said outgoing MIDI control interface providing said outgoing control signals to said second electronic music system using said wireless communication link.

116. A method for interconnecting electronic music systems, said method comprising:

receiving incoming MIDI control signals at an incoming MIDI control interface, wherein said incoming MIDI control signals are generated by a first electronic music system;

providing said incoming MIDI control signals to a second electronic music system using a wireless communication link;

receiving outgoing MIDI control signals at an outgoing MIDI control interface, wherein said outgoing MIDI control signals are generated by said first electronic music system; and

providing said outgoing control signals to said second electronic music systems using said wireless communication link.